

AMENDMENTS TO THE CLAIMS

Claims 1-10. (Canceled)

11. (Previously presented) An apparatus for detecting defects in devices, comprising:

a sample chamber;

a movable sample stage for holding a device sample inside the sample chamber;

a charged particle beam generator for irradiating the sample held by the sample stage with a charged particle beam;

a charged particle detector for detecting a secondary charged particle generated from the sample as it is irradiated with the charged particle beam;

an image display for displaying an observation image based on the detection of the secondary charged particle by the charged particle detector;

a conductor probe to be brought into contact with the sample; and

a conductor probe transport mechanism for transporting the conductor probe, wherein

the image display displays a position mark indicating the tip of the conductor probe.

12. (Previously presented) The apparatus for detecting defects in devices according to claim 11, further comprising a plurality of conductor probes and a plurality of conductor probe transport mechanisms for transporting the conductor probes.

13. (Previously presented) The apparatus for detecting defects in devices according to claim 12, wherein the position mark is displayed differently depending on whether the conductor probes are in contact with the surface of the sample or not.

14. (Previously presented) The apparatus for detecting defects in devices according to claim 11, wherein the position mark is displayed differently depending on whether the conductor probe is in contact with the surface of the sample or not.

15. (Previously presented) The apparatus for detecting defects in devices according to claim 11, wherein the image display displays a recorded image based on the detection of the charged particle beam, wherein the position mark is superposed on the recorded image.

16. (Previously presented) The apparatus for detecting defects in devices according to claim 15, further comprising transport means for transporting the position mark on the recorded image.

17. (Previously presented) The apparatus for detecting defects in devices according to claim 16, wherein the mark is selected and then transported by the transport means.

18. (Withdrawn) A method of detecting defects in devices, wherein a voltage is applied to a first pattern via a probe, and a region including a second pattern different from the first pattern, to which the voltage is applied, is scanned with a

charged particle beam to produce an image, based on which it is determined whether there is continuity or breakage between the first and second patterns, and wherein

it is determined that there is continuity between the first and second patterns if a luminance signal intensity of the second pattern varies in excess of a certain luminance signal threshold intensity upon varying the voltage applied from the probe with time, and it is determined that there is breakage between the first and second patterns if the luminance signal intensity does not exceed the certain luminance signal threshold intensity.

19. (Withdrawn) An apparatus for detecting defects in devices, comprising:

a sample chamber;

a movable sample stage for holding a device sample inside the sample chamber;

a charged particle beam generator for irradiating the sample held by the sample stage with a charged particle beam;

a charged particle detector for detecting a secondary charged particle generated from the sample as it is irradiated with the charged particle beam;

an image display for displaying an observation image based on the detection of the secondary charged particle by the charged particle detector;

a conductor probe to be brought into contact with the sample;

a conductor probe transport mechanism for transporting the conductor probe; and

a controller for determining whether a luminance signal intensity obtained from a pattern on the device sample displayed on the image display exceeds a certain luminance signal threshold intensity as a voltage is applied from the conductor probe to the pattern on the device sample and then varied with time.

20. (New) An apparatus for detecting defects in devices, comprising:

a sample chamber;

a movable sample stage for holding a device sample inside the sample chamber;

a charged particle beam generator for irradiating the sample held by the sample stage with a charged particle beam;

a charged particle detector for detecting a secondary charged particle generated from the sample as it is irradiated with the charged particle beam;

an image display for displaying an observation image based on the detection of the secondary charged particle by the charged particle detector;

a conductor probe to be brought into contact with the sample; and

a conductor probe transport mechanism for transporting the conductor probe, wherein

the image display displays a position mark indicating the tip of the conductor probe on the observation image on which the conductor probe is displayed.